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*** YOU HAVE NEW MAIL ***

=> s guanidin? and poly (3a) lysine
L1        5453 GUANIDIN? AND POLY (3A) LYSINE

=> s l1 and L lysine
L2        4497 L1 AND L LYSINE

=> s l2 and graft (4a) dextran
L3          13 L2 AND GRAFT (4A) DEXTRAN

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4            9 DUP REM L3 (4 DUPLICATES REMOVED)

=> d l4 bib abs

L4   ANSWER 1 OF 9  USPATFULL on STN
AN     2009:118344  USPATFULL
TI     Influenza Therapeutic
IN     Chen, Jianzhu, Lexington, MA, UNITED STATES
       Eisen, Herman N., Waban, MA, UNITED STATES
       Ge, Qing, Cambridge, MA, UNITED STATES
PA     Massachusetts Institute of Technology, Cambridge, MA, UNITED STATES
       (U.S. corporation)
PI     US 20090106852      A1  20090423
AI     US 2007-952056      A1  20071206 (11)
RLI    Continuation of Ser. No. US 2003-674159, filed on 29 Sep 2003, PENDING
PRAI   US 2002-414457P     20020928 (60)
       US 2003-446377P     20030210 (60)
DT     Utility
FS     APPLICATION
LREP   CHOATE, HALL & STEWART LLP, TWO INTERNATIONAL PLACE, BOSTON, MA, 02110,
       US
CLMN   Number of Claims: 79
ECL    Exemplary Claim: 1-200
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DRWN 56 Drawing Page(s)
LN.CNT 8211
AB The present invention provides methods and compositions for inhibiting influenza infection and/or replication based on the phenomenon of RNA interference (RNAi) well as systems for identifying effective siRNAs and shRNAs for inhibiting influenza virus and systems for studying influenza virus infective mechanisms. The invention also provides methods and compositions for inhibiting infection, pathogenicity and/or replication of other infectious agents, particularly those that infect cells that are directly accessible from outside the body, e.g., skin cells or mucosal cells. In addition, the invention provides compositions comprising an RNAi-inducing entity, e.g., an siRNA, shRNA, or RNAi-inducing vector targeted to an influenza virus transcript and any of a variety of delivery agents. The invention further includes methods of use of the compositions for treatment of influenza.

=> d l4 bib abs 1-9

L4 ANSWER 1 OF 9 USPATFULL on STN
AN 2009:118344 USPATFULL
TI Influenza Therapeutic
IN Chen, Jianzhu, Lexington, MA, UNITED STATES
Eisen, Herman N., Waban, MA, UNITED STATES
Ge, Qing, Cambridge, MA, UNITED STATES
PA Massachusetts Institute of Technology, Cambridge, MA, UNITED STATES (U.S. corporation)
PI US 20090106852 A1 20090423
AI US 2007-952056 A1 20071206 (11)
RLI Continuation of Ser. No. US 2003-674159, filed on 29 Sep 2003, PENDING
PRAI US 2002-414457P 20020928 (60)
US 2003-446377P 20030210 (60)
DT Utility
FS APPLICATION
LREP CHOATE, HALL & STEWART LLP, TWO INTERNATIONAL PLACE, BOSTON, MA, 02110, US
CLMN Number of Claims: 79
ECL Exemplary Claim: 1-200
DRWN 56 Drawing Page(s)
LN.CNT 8211
AB The present invention provides methods and compositions for inhibiting influenza infection and/or replication based on the phenomenon of RNA interference (RNAi) well as systems for identifying effective siRNAs and shRNAs for inhibiting influenza virus and systems for studying influenza virus infective mechanisms. The invention also provides methods and compositions for inhibiting infection, pathogenicity and/or replication of other infectious agents, particularly those that infect cells that are directly accessible from outside the body, e.g., skin cells or mucosal cells. In addition, the invention provides compositions comprising an RNAi-inducing entity, e.g., an siRNA, shRNA, or RNAi-inducing vector targeted to an influenza virus transcript and any of a variety of delivery agents. The invention further includes methods of use of the compositions for treatment of influenza.

L4 ANSWER 2 OF 9 USPATFULL on STN
AN 2008:24014 USPATFULL
TI Substance Capable Of Accelarating Nucleotide Chain Exchange Reaction
IN Maruyama, Atsushi, Sagamihara-shi, JAPAN
PA Japan Science and Technology Agency, Samitama, JAPAN (non-U.S.

corporation)
PI US 20080021195 A1 20080124
AI US 2004-591268 A1 20040729 (10)
WO 2004-JP10824 20040729
20070618 PCT 371 date
PRAI JP 2004-58336 20040303
DT Utility
FS APPLICATION
LREP BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS CHURCH, VA, 22040-0747, US
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 628
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The purpose of the present invention is to provide a substance having a several ten to several hundred-fold exchange reaction accelerating activity as compared with that of conventional copolymers. In particular, the invention provides a preparation for accelerating an exchange reaction between a nucleotide sequence at specific site of a double stranded DNA or RNA for its homologous nucleotide sequence, the preparation comprising a cationic polymer having a guanidine group-containing main chain and a hydrophilic functional groups as an active ingredient. Thus, a substance having a several ten to several hundred-fold exchange reaction accelerating activity as compared with that of conventional copolymers can be provided. With this substance, the nucleotide chain exchange can be performed at a lower temperature and/or a higher rate than in the prior art.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 3 OF 9 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
DUPLICATE 1
AN 2008:163213 BIOSIS
DN PREV200800167190
TI Activation of DNA strand exchange by cationic comb-type copolymers: effect of cationic moieties of the copolymers.
AU Choi, Sung Won; Kano, Arihiro; Maruyama, Atsushi [Reprint Author]
CS Kyushu Univ, Inst Mat Chem and Engn, 744-CE11 Motooka, Fukuoka 8190395, Japan
maruyama@ms.ifoc.kyushu-u.ac.jp
SO Nucleic Acids Research, (JAN 2008) Vol. 36, No. 1, pp. 342-351.
CODEN: NARHAD. ISSN: 0305-1048.
DT Article
LA English
ED Entered STN: 5 Mar 2008
Last Updated on STN: 9 Apr 2008
AB We have previously reported that poly(L-lysine )-graft-dextran cationic comb-type copolymers accelerate strand exchange reaction between duplex DNA and its complementary single strand by >4 orders of magnitude, while stabilizing duplex. However, the stabilization of the duplex is considered principally unfavourable for the accelerating activity since the strand exchange reaction requires, at least, partial melting of the initial duplex. Here we report the effects of different cationic moieties of cationic comb-type copolymers on the accelerating activity. The copolymer having guanidino groups exhibited markedly higher accelerating effect on strand exchange reactions than that having primary amino groups. The high accelerating effect of the former is considered to be due to its lower stabilizing effect on duplex DNA, resulting from its increased affinity to single-stranded DNA. The difference in affinity was clearly

demonstrated by a fluorescence correlation spectroscopy study; the interaction of the former with single-stranded DNA still remained high even at 1 M NaCl, while that of the latter completely disappeared. These results suggest that some modes of interactions, such as hydrogen bonding, other than electrostatic interactions between the copolymers having guanidino groups and DNAs may be involved in strand exchange activation.

L4 ANSWER 4 OF 9 USPATFULL on STN
AN 2006:189319 USPATFULL
TI Influenza therapeutic
IN Chen, Jianzhu, Brookline, MA, UNITED STATES
Ge, Qing, Cambridge, MA, UNITED STATES
Eisen, Herman N., Waban, MA, UNITED STATES
PI US 20060160759 A1 20060720
AI US 2005-102097 A1 20050408 (11)
RLI Continuation-in-part of Ser. No. US 2003-674159, filed on 29 Sep 2003, PENDING Continuation-in-part of Ser. No. US 2003-674087, filed on 29 Sep 2003, PENDING
PRAI US 2002-414457P 20020928 (60)
US 2003-446377P 20030210 (60)
US 2005-664580P 20050322 (60)
DT Utility
FS APPLICATION
LREP CHOATE, HALL & STEWART LLP, TWO INTERNATIONAL PLACE, BOSTON, MA, 02110, US
CLMN Number of Claims: 73
ECL Exemplary Claim: 1
DRWN 124 Drawing Page(s)
LN.CNT 8470
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides compositions comprising an RNAi-inducing entity targeted to an influenza virus transcript and any of a variety of delivery agents. The invention further includes methods of use of the compositions for inhibiting a biological activity of an influenza virus and/or for treatment or prevention of influenza. The invention provides target portion sequences that are favorably conserved for RNAi across a plurality of influenza virus A strains isolated from human hosts and/or avian hosts and RNAi-inducing entities, e.g., siRNAs and shRNAs, targeted to such favorably conserved target portions. The invention provides a variety of nucleic acids comprising sequences identical or complementary to at least a portion of one or more of these favorably conserved target portion sequences. The invention further provides methods and compositions for delivering RNAi-inducing agents to an organ or tissue of a mammalian subject, e.g., to the lung. Methods of diagnosing influenza and determining the susceptibility of an influenza virus to inhibition by an RNAi-inducing agent are also provided. Transgenic animals that express an RNAi-inducing agent targeted to an influenza gene are another aspect of the invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2007:662405 CAPLUS
DN 147:380014
TI Structural effect of cationic copolymers on nucleic acid-chaperoning activity
AU Takada, Kaoru; Choi, Sung Won; Yamayoshi, Asako; Kano, Arihiro; Maruyama, Atsushi
CS Institute for Materials Chemistry and Engineering, Kyushu University, 6-10-1 Hakozaki, Fukuoka, 812-8581, Japan

SO Nucleic Acids Symposium Series (2006), (50), 27-28
CODEN: NASSCJ
URL: http://nass.oxfordjournals.org/content/vol50/issue1/index.dtl
PB Oxford University Press
DT Journal; (online computer file)
LA English
AB Nucleic acid chaperones are nucleic acid-binding proteins that support the correct folding and hybridization of nucleic acids. Retroviral nucleocapsid (NC) proteins (such as HIV-I NCp7) exhibit nucleic acid chaperone activity. In order to evaluate the effect of cationic copolymer structures on their nucleic acid-chaperoning activity, the authors have prepared various copolymers having different cationic residues or backbone mol. weight It was revealed that nucleic acid-chaperoning activity increases with increasing mol. weight of the copolymer backbone and that a copolymer having guanidino groups is effective for increasing nucleic acid-chaperoning activity. Compared with PLL-g-Dex, GPLL-g-Dex has weak activity to stabilize ds DNA. This weak stabilization effect of GPLL-g-Dex may contribute to the higher accelerating effect. A symposium report; Nucleic Acid Symposium Series (Oxford University Press).
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:1004872 CAPLUS
DN 143:280578
TI Acceleration of DNA strand exchange reaction by cationic polymers
IN Maruyama, Atsushi
PA Japan Science and Technology Agency, Japan
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2005085432 | A1 | 20050915 | WO 2004-JP10824 | 20040729 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | CA 2575954 | A1 | 20050915 | CA 2004-2575954 | 20040729 |
| | US 20080021195 | A1 | 20080124 | US 2007-591268 | 20070618 |
| PRAI | JP 2004-58336 | A | 20040303 | | |
| | WO 2004-JP10824 | W | 20040729 | | |

AB There are provided prepns. for accelerating strand exchange reaction of double stranded DNA or RNA with a nucleotide sequence homologous to the sequence, which comprise a cationic polymer having a guanidino group-containing main chain and hydrophilic functional groups as an active ingredient. The accelerating effect of cationic substances on the DNA strand exchange reaction between a 20 bp DNA duplex and its complementary single strand was studied. A polycationic comb-type copolymer, that consists of a poly(L-lysine) backbone and a dextran graft chain (αPLL-g-Dex) and known to stabilize triplex DNA, expedites the strand exchange reaction under

physiol. relevant conditions. It was demonstrated that the strand exchange rate is considerably accelerated by the polycation comb-type copolymer.
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 9 USPATFULL on STN
AN 2005:10485 USPATFULL
TI Compositions and methods for delivery of short interfering RNA and short hairpin RNA
IN Chen, Jianzhu, Brookline, MA, UNITED STATES
Eisen, Herman N., Waban, MA, UNITED STATES
Ge, Qing, Cambridge, MA, UNITED STATES
PA Massachusetts Institute of Technology (U.S. corporation)
PI US 20050008617 A1 20050113
AI US 2003-674087 A1 20030929 (10)
PRAI US 2002-414457P 20020928 (60)
US 2003-446377P 20030210 (60)
DT Utility
FS APPLICATION
LREP Choate, Hall & Stewart, Exchange Place, 53 State Street, Boston, MA, 02109
CLMN Number of Claims: 97
ECL Exemplary Claim: 1
DRWN 19 Drawing Page(s)
LN.CNT 4786
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides compositions comprising an RNAi-inducing entity any of a variety of different delivery agents. Preferred RNAi-inducing agents include siRNA, shRNA, and RNAi-inducing vectors. Preferred delivery agents include cationic polymers, modified cationic polymers, lipids, and surfactants suitable for introduction into the lung. The invention further provides methods of inhibiting expression of a target transcript in a mammal and methods of treating or preventing a disease or condition in a mammal by administration of the compositions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 9 USPATFULL on STN
AN 2004:307842 USPATFULL
TI Influenza therapeutic
IN Chen, Jianzhu, Brookline, MA, UNITED STATES
Eisen, Herman N., Waban, MA, UNITED STATES
Ge, Qing, Cambridge, MA, UNITED STATES
PA Massachusetts Institute of Technology (U.S. corporation)
PI US 20040242518 A1 20041202
AI US 2003-674159 A1 20030929 (10)
PRAI WO 2003-US30502 20030929
WO 2003-US30508 20030929
US 2002-414457P 20020928 (60)
US 2003-446377P 20030210 (60)
DT Utility
FS APPLICATION
LREP Choate, Hall & Stewart, Exchange Place, 53 State Street, Boston, MA, 02109
CLMN Number of Claims: 200
ECL Exemplary Claim: 1
DRWN 56 Drawing Page(s)
LN.CNT 8786
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides methods and compositions for inhibiting

influenza infection and/or replication based on the phenomenon of RNA interference (RNAi) well as systems for identifying effective siRNAs and shRNAs for inhibiting influenza virus and systems for studying influenza virus infective mechanisms. The invention also provides methods and compositions for inhibiting infection, pathogenicity and/or replication of other infectious agents, particularly those that infect cells that are directly accessible from outside the body, e.g., skin cells or mucosal cells. In addition, the invention provides compositions comprising an RNAi-inducing entity, e.g., an siRNA, shRNA, or RNAi-inducing vector targeted to an influenza virus transcript and any of a variety of delivery agents. The invention further includes methods of use of the compositions for treatment of influenza.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 9 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
DUPLICATE 2
AN 2005:46786 BIOSIS
DN PREV200500047566
TI Preparation of cationic comb-type copolymer having guanidino moieties and its interaction with DNAs.
AU Choi, Sung Won; Sato, Yuichi; Akaike, Toshihiro; Maruyama, Atsushi [Reprint Author]
CS Grad Sch Biosci and BiotechnolDept Biomol Engn, Tokyo Inst Technol, 4259 Nagatsuta, Yokohama, Kanagawa, 2268501, Japan
amaruyam@bio.titech.ac.jp
SO Journal of Biomaterials Science Polymer Edition, (2004) Vol. 15, No. 9, pp. 1099-1110. print.
ISSN: 0920-5063 (ISSN print).
DT Article
LA English
ED Entered STN: 26 Jan 2005
Last Updated on STN: 26 Jan 2005
AB In order to evaluatet effects of different cationic moieties, such as primary amino and guanidino groups, on interactions between DNAs and cationic comb-type copolymers, comb-type copolymers having guanidino groups were prepared. The copolymers (GPLL-g-Dex) were obtained by guanidination of poly(L-lysine)-graft-dextran copolymers (PLL-g-Dex) using 1-guanyl-3,5-dimethylpyrazole nitrate under weak basic conditions. The resulting copolymers were characterized using NMR spectroscopy and size-exclusion chromatography-multiangle light scattering (SEC-MALS). The primary amino groups of the PLL backbones were thoroughly replaced with guanidino ones without any detectable side reactions, including fragmentation of PLL or Dex chains. The interactions of GPLL-g-Dex and PLL-g-Dex with DNAs were assessed by UV-melting curve measurements. These copolymers diversly affected the melting behavior of double-stranded DNA (dsDNA). GPLL-g-Dex has a lower ability to increase the T. of dsDNA than PLL-g-Dex and also exhibits a higher affinity for dsDNA. The results suggest that the stability of dsDNA may be affected not only by ionic interaction between the copolymers and DNAs, but also by other modes of interactions, such as hydrogen-bondinginteractions.

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